

PRODUCT DATA SHEET

Revised: 29 April 2005
Printed: 31 January 2009; page 1 of 1



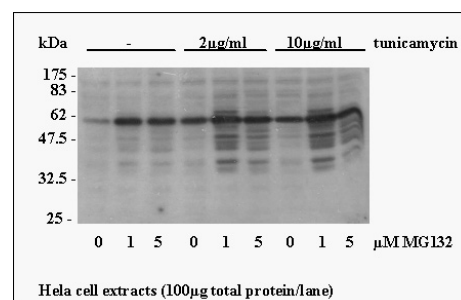
Product name(s):	HERP, rabbit polyclonal antibody
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Catalogue number:	PW9705	Batch number:	XXXX	Expiry date:	12 months from receipt
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Product information:

Several homocysteine-responsive genes in cultured human vascular endothelial cells, including the endoplasmic reticulum (ER)-resident molecular chaperone GRP78/BiP, have been identified. It has been demonstrated that homocysteine induces the ER stress response and leads to the expression of homocysteine-responsive endoplasmic reticulum-resident ubiquitin-like domain member 1 protein (HERP)¹. mRNA expression of HERP is strongly up-regulated by inducers of ER stress, including mercaptoethanol, tunicamycin, A23187, and thapsigargin. The ER stress-dependent induction of HERP is also observed at the protein level.

HERP is a membrane-associated ER protein. It is the first integral membrane protein regulated by the ER stress response pathway. Both the N and C termini face the cytoplasmic side of the ER; this membrane topology makes it unlikely that HERP acts as a molecular chaperone for proteins in the ER, in contrast to GRP78 and other ER stress-responsive proteins. HERP may, therefore, play an unknown role in the cellular survival response to stress.



Luminograph of HeLa cell extracts after SDS-PAGE followed by blotting onto PVDF membrane and probing with antibody PW9705. Antibody dilution 1:50 000. [Data courtesy of Dr Michael Seeger, Institute of Biochemistry, Berlin, Germany]

Polyclonal antibody PW9705 was generated by immunization of rabbits with a GST fusion protein corresponding to the N-terminal cytoplasmic region of human HERP (residues 1-240). The antibody is supplied as unpurified antiserum containing 0.01% sodium azide as preservative. Please note that HERP runs on Western blot with an apparent molecular weight of just below 60kDa.

- Data:**
Swiss-Prot accession number: Q15011; length: 391 amino acids; molecular weight: 43720Da.
- Immunoblotting:**
A dilution of 1:50,000 was used for Western blotting as shown above.
- Immunoprecipitation:**
This antibody has been used for immunoprecipitation; however, it works inefficiently precipitating only some 10% of the total protein.
- Immunohistochemistry:**
This antibody has not been characterized for use in immunohistochemistry.

Storage and use:

Store unopened vial at -20°C until required for use. AVOID REPEATED FREEZE-THAW CYCLES. Aliquot undiluted antibody into smaller volumes prior to freezing if appropriate. Store diluted antibody at 2-4°C and use within 1 month.

Dilute to working strength with phosphate buffered saline pH 7.4 and 1% normal goat serum (if a goat anti rabbit IgG secondary antibody is to be used).

References:

1. Kokame, K., Agarwala, K.L., Kato, H. and Miyata, T. HERP, a new ubiquitin-like membrane protein induced by endoplasmic reticulum stress. *J. Biol. Chem.*, **275**, 32846-32853 (2000).